

which have become smaller when transported from a comparatively thin liquid into a denser one.

It is well known, however, that E. H. Weber long since ascertained, in the mesentery of living frogs, the presence of lymphatics surrounding the capillary blood-vessels. Under the microscope he saw the rapid currents of the blood surrounded on all sides by the current of the lymph, which was from ten to twenty times as slow, these currents being separated from each other by the arterial coat in such a manner that there was no mixture of the globules of the lymph with those of the blood.

As I have neither time nor space for the exposition of the historical investigations which I have made upon this subject, they will find a place in the fourth volume of the 'Journal d'Anatomie et de Physiologie,' where this memoir will be published entire.

To sum up. From the numerous observations and experiments which I have made, it consequently follows that the cutaneous and subcutaneous vessels described by Monro, Hewson, &c. as lymphatics are veins; some in the condition of true veins, others in that of venous sinuses. Beyond these veins it is impossible to inject any vessel, either by means of mercury or otherwise. The division of the lymphatics of fishes into *superficial* and *deep-seated* or *visceral*, still adopted by some modern authors, must, consequently, be abandoned, the former kind of vessels not existing in this class of Vertebrata.—*Comptes Rendus*, January 7, 1866, pp. 20–24.

On *Xenacanthus Dechenii*. By Prof. KNER.

Professor Kner has investigated the fossils referred to *Xenacanthus Dechenii* (Beyr.) in the Museums at Vienna, Dresden, Berlin, and Breslau, and states the results of his examination as follows:—

1. From the structure of its fins, it cannot be approximated either to *Squatina* or to any other genus of Plagiostomi or Cartilaginous Fishes; nor, notwithstanding its peculiarly formed and frequently united ventral fins, can it be placed in the vicinity of the *Discoboli*. It rather represents a genus singularly intermediate between the Placoids (Selachii) and Malacopterygii, one of the transitional forms characterized by Agassiz as "prophetic types," and, in Professor Kner's opinion, can only find its nearest allies among living fishes in the great group of the Siluroidei, although still very distant from these.

2. It is certain that *Diplodus* (Agass.), *Orthacanthus* (Goldf.), and *Xenacanthus* (Beyr.) are generically identical; and this statement probably applies also to *Pleuracanthus* (Agass.).

3. On the other hand, however, it seems very probable that *Xenacanthus Dechenii* will have to be divided into at least two species, which might be characterized as *laevidens* and *ptychodus*, unless the remarkable differences are merely sexual.—*Bericht der Akad. d. Wiss. in Wien*, January 3, 1867, p. 6.